

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/059473 A3

(51) International Patent Classification⁷: **G01C 15/00**

(21) International Application Number:
PCT/EP2004/014365

(22) International Filing Date:
16 December 2004 (16.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
103 59 415.9 16 December 2003 (16.12.2003) DE

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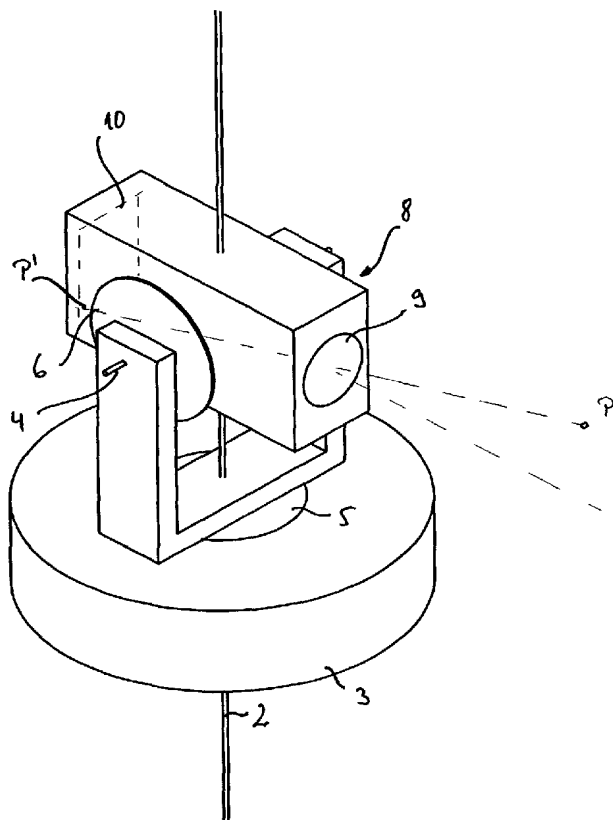
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW.

(81) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,

[Continued on next page]

(54) Title: CALIBRATION OF A SURVEYING INSTRUMENT



(57) Abstract: A method for calibrating a surveying instrument is disclosed the survey instrument comprising a base element (3) and a camera with an image sensor (10), the camera being rotatable about a vertical axis (2) fixed with respect to said base element and being rotatable about a tilting axis (4), the tilting axis being rotated about the vertical axis with rotation of the camera about the vertical axis. In the method, data associated with calibration points (P) and images (P1) of the calibration points on the image sensor captured in different faces are used, the data for each of said calibration points comprising distance data and the data for each of the images of each said calibration point comprising image position data and orientation data. Further, on the basis of the distance data for each of the calibration points and the image position and orientation data for each of the images of the calibration points the surveying instrument is calibrated simultaneously taking into account at least one optical property of camera and at least one of the relative orientation of the vertical axis and the tilting axis and the orientation of the camera relative to one of the base element, the vertical axis and the tilting axis.



SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
1 December 2005

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.